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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,008	08/22/2003	Sung-Jae Moon	YOM-0048	8963
7590		03/06/2006	EXAMINER	
Cantor Colburn LLP		NGUYEN, HOAN C		
55 Griffin Road South		ART UNIT		
Bloomfield, CT 06002		PAPER NUMBER		
		2871		

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/646,008

Applicant(s)

MOON, SUNG-JAE

Examiner

HOAN C. NGUYEN

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 6, 16, 17 and 23-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-15 and 18-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Applicant's arguments with respect to claim 1 based on the Response filed on 02 September 2005 have been considered but are in the same ground(s) of rejection. Therefore, this is Final action.

Election/Restrictions

Applicant's election with traverse of Species of the first embodiment (claims 1-15 and 18-22) filing on 12/08/2005 is acknowledged.

Applicant's arguments regarding the restriction requirement have been considered; however, the traversal was on the grounds that there is no serious burden on the Examiner in examining all of claims 1-21 together. This is not found persuasive since there is two following species: First embodiment corresponding to Claim 4 drawn to a LCD comprising the data driving IC mounted on the liquid crystal panel (there is no Drawing describes this matter); and Second embodiment corresponding to Claim 6 drawn to a LCD comprising the data driving IC mounted on flexible printed circuit films FPC (Fig. 3).

Therefore, the requirement is deemed proper and is considered to be final.

Claims 6, 16-17 and 23-25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions and species, there being no allowable generic or linking claim. Therefore, ONLY claims 1-5, 7-15 and 18-22 are pending in the elected Species.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following features:

- claim 4: "the data driving IC mounted on the liquid crystal panel"
- claim 9: "a plurality of second connecting lines disposed between the second driving signal wire and at least another part of the first display signal wire, and connected to at least one of the second driving signal wire and the another part of the first display signal wire".

must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must

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be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: Claim 9 recites "a plurality of second connecting lines disposed between the second driving signal wire and at least another part of the first display signal wire, and connected to at least one of the second driving signal wire and the another part of the first display signal wire". **There is no the underlined feature shows in Fig. 6 (the elected species).**

However, according to Fig. 6, a plurality of second connecting lines should be connection member 94 or connecting portions 122, which are disposed between the second driving signal wire 132 and second display signal lines (gate lines 121) and connected to at least one of the second driving signal wire 132 and second display signal lines (gate lines 121).

Appropriate correction is required.

Therefore, examiner will take "another part of the first display signal wire" in claim 9 to be "another part of the second display signal wire".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-5, 7-15 and 18-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Imajo et al. (US2001/0015709).

Imajo et al. teach (Figs. 34-37) a liquid crystal display device comprising:

Claim 1:

- a liquid crystal panel including
 - a first display signal wire having a plurality of a first display signal lines (drain lines DL),
 - a second signal wire having a plurality of a second display signal lines (gate lines GL) that cross the first display signal lines,
 - a plurality of switching elements (in abstract) each of which is connected to both of one of the first display signal lines and one of the second display signal lines, and
 - pixel electrodes (in abstract) connected to the switching elements;
- a first driving signal wire (drain data lines DDL and power supply lines PWL-D) transmitting driving signals for the first or second display signal lines, wherein the first driving signal wire is separated from the first and second display signal wires, the switching elements, and the pixel

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electrodes, and includes a first pad connected thereto at its near end (PAD-B as shown in Fig. 35);

- a plurality of first connecting lines (the wirings OUT in Figs 28 consider as first connecting lines on drain lines side, this lines also show in Fig. 34, see attachment) disposed between the first driving signal wire (data lines DDL and power supply lines PWL-D) and a part of the first display signal wire DL, and connected to at least one of the first driving signal wire and the part of the first display signal wire.

Claims 2-4:

- a plurality of drivers respectively connected to the first driving signal wire, wherein each of the drivers is in the form of a chip (IC1/IC2) and each of the drivers is formed on the liquid crystal panel as Fig. 35 shown.

Claim 7:

- a second driving signal wire (gate data lines DGL and power supply lines PWL-G) transmitting driving signals for the first or second display signal lines, wherein the second driving signal wire is separated from the first and second display signal wires, the switching elements, and the pixel electrodes, and includes a second pad connected thereto at its near end (PAD-A).

Claim 14:

- a shorting bar (short-circuit line/common line ST shown in Fig. 26) connected to the first driving signal wire DL.

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wherein

Claim 5:

- each of the drivers is directly connected to the first driving signal wire as Fig. 35 shown.

Claim 8:

- a distance between the first driving signal wire and the first display signal wire is smaller than a distance between the second driving signal wire and the first display signal wire as Fig. 35 shown.

Claim 9:

- a plurality of second connecting lines disposed between the second driving signal wire and at least another part of the second display signal wire, and connected to at least one of the second driving signal wire and the another part of the second display signal wire.

Claim 10:

- the first and second connecting lines are alternately disposed as Fig. 26 shown (wherein connecting lines connect to BP outside and inside alternately).

Claim 11:

- one end of the connecting line is connected to the first display signal wire (DL), and another end thereof is connected to the first driving signal wire via IC.

Claim 12:

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- the first connecting line comprises two sections that are electrically separated each other, and the two sections are respectively connected to the first display signal wire (DL) and the first driving signal wire via IC.

Claim 13:

- the first connecting line is electrically connected to the first display signal wire (DL) and the first driving signal wire via IC.

Claim 15:

- the first driving signal wire further comprises a plurality of second pads connected at PAD-A thereto at its intermediate portion.

Claim 18:

- the first driving signal wire extends to an edge of the panel.

Claim 19:

- the first display signal wire transmits gate signals for inherently turning on and off the switching elements, and the second display signal wire transmits data signals for the pixel electrodes applied through the switching elements.

Claim 20:

- the first driving signal wire (data lines DDL/DGL and power supply lines PWL) transmits a gate-off voltage or a ground voltage (paragraph 133).

Claims 21-22:

- the first display signal wire (data lines DDL/DGL and power supply lines PWL) transmits data signals for the pixel electrodes, and the second display signal wire (data lines DDL/DGL and power supply lines PWL)

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controls inherently turning on and off of the switching elements such that the transmission of the data signals to the pixel electrodes is controlled, wherein the first driving signal wire transmits gray voltages, a clock signal, or a driving voltage to the drivers (paragraph 132).

Response to Arguments

Applicant's arguments filed on 02 September 2005 have been fully considered but they are not persuasive.

Applicant's ONLY arguments are follows:

Imajo does not disclose "a plurality of first connecting lines disposed between the first driving signal wire and a part of the of first display signal wire, and connected to at least one of the first driving signal wire and the part of first display signal wire" as recite in amended claim 1.

Examiner's responses to Applicants' ONLY arguments are follows:

Imajo disclose (Figs. 26-27) "a plurality of first connecting lines disposed between the first driving signal wires and a part of the of first display signal wire (drain lines DL), and connected to at least one of the first driving signal wire and the part of first display signal wire" (see attachments 1-2); or Imajo disclose (Fig. 28) "a plurality of first connecting lines (drain lines outside of SUB2 that is placed on SUB1) disposed between the first driving signal wires (OUT) and a part of the of first display signal wire (drain lines DL inside of SUB2 that is placed on SUB1), and connected to at least one of the first driving signal wire and the part of first display signal wire" (see attachment 3)

Conclusion

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOAN C. NGUYEN whose telephone number is (571) 272-2296. The examiner can normally be reached on MONDAY-THURSDAY:8:00AM-4:30PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim H. Robert can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HOAN C. NGUYEN
Examiner
Art Unit 2871

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ANDREW SCHECHTER
PRIMARY EXAMINER

Attachment 1
(please scan and mail)

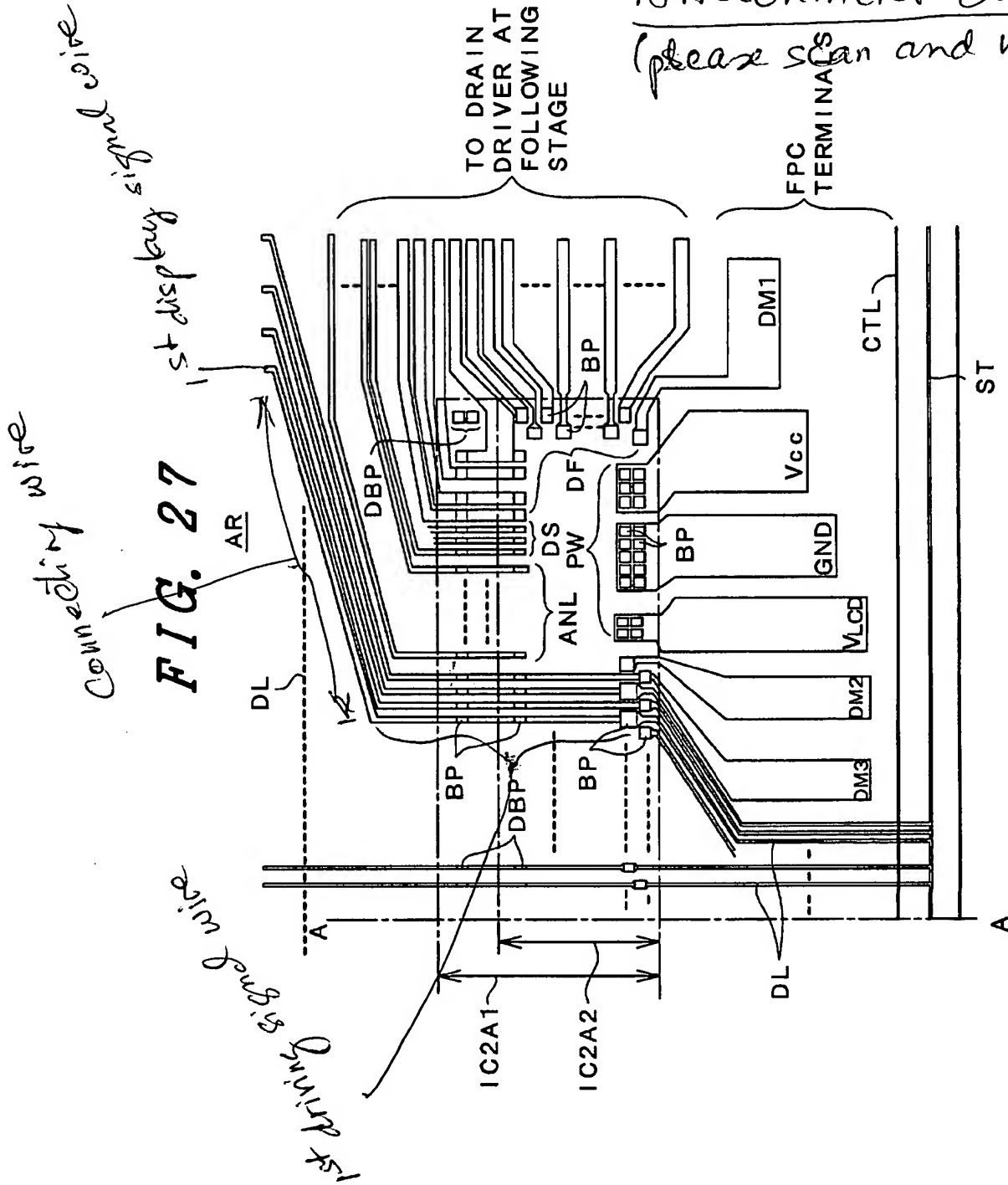


FROM DRAIN
DRIVER AT
PRECEDING
STAGE

**FPC
TERMINALS**

2/27/06, EAST Version: 2.0.3.0

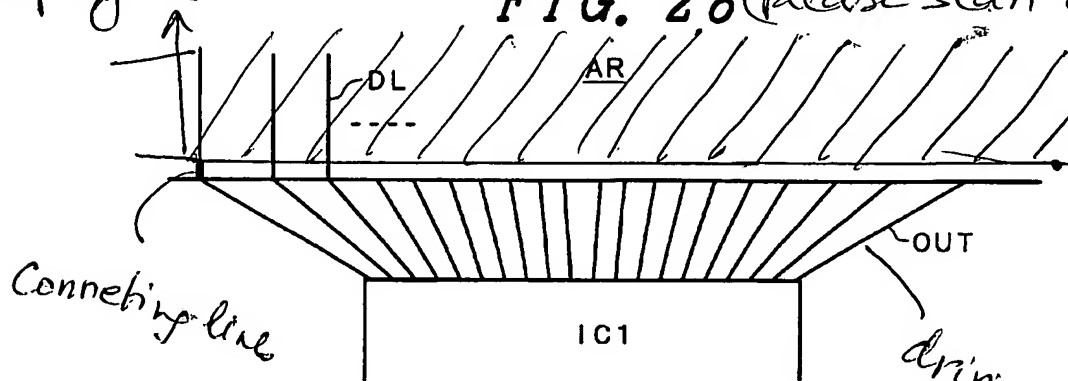
Attachment 2
(please scan and mail)



display signal lines

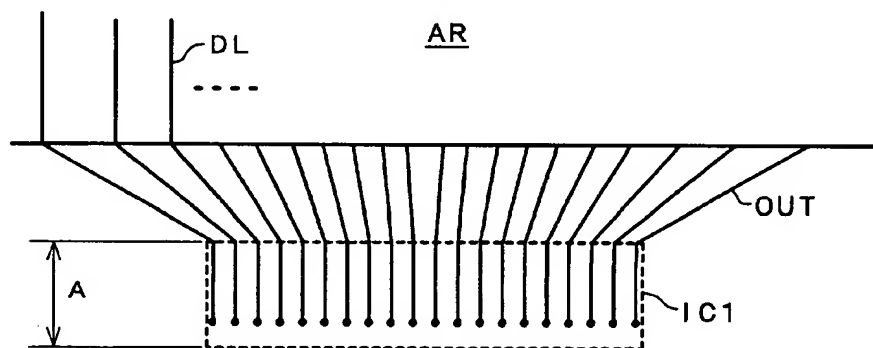
Attachment 3

FIG. 28 (please scan and mail)



sub 2
placed on
sub 1
as shown
in fig 23

FIG. 29



driving signal wire

FIG. 30

